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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,617	01/16/2002	Dennis K. Lee	06618/760001 / CIT 3372	9033
20985	7590	04/05/2005	EXAMINER	
FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081				TALAPATRA, ANIKA F
		ART UNIT		PAPER NUMBER
				2631

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	M
	10/051,617	LEE ET AL.	
	Examiner Anika Talapatra	Art Unit 2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 16 January 2002.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 1-16 and 19-20 is/are allowed.  
 6) Claim(s) 17 is/are rejected.  
 7) Claim(s) 18 and 21 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 16 January 2002 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Drawings*

1. Figures 1 and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

2. The disclosure is objected to because of the following informalities: The abbreviation QPSK is used in paragraph 1, "...FQPSK Viterbi receiver." The phrase should read "Feher's Quaternary phase shift keying (FQPSK) Viterbi receiver." Appropriate correction is required.

### *Claim Objections*

3. Claim 21 objected to because of the following informalities: Claim 21 recites the limitation "FWPSK" in line 1. There is insufficient antecedent basis in the base claim 1 for this limitation in claim 21. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
4. Claim 17 rejected under 35 U.S.C. 102(a) as being unpatentable over admitted prior art (paragraphs 8, 12, 14, 20, and 22; figures 1 and 3). Admission discloses a filter element, receiving an input FQPSK signal and producing a filtered FQPSK signal (paragraphs 8, 14, 20, and 22; figure 3, BPF). Admission discloses a conventional Viterbi algorithm receiver, for producing demodulated signals based on FQPSK input signals (paragraphs 8, 14, 20, and 22; figure 3).

***Allowable Subject Matter***

5. Claims 1- 16 and 19-21 allowed.
6. Claim 18 objected to as being dependent upon a rejected base claim 17, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements detailed in 1-3 above or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

8. The following is an examiner's statement of reasons for allowance: A search of prior art of record failed to teach, either alone or in combination: a receiver, comprising averaged waveforms, each said averaged waveform comprising an average of a plurality of FQPSK waveforms; a plurality of correlators, to correlate an input signal with each of said averaged waveforms of said plurality to form correlations; and a Viterbi trellis decoder using said correlations to make decisions on the transmitted signals.

Feher (U.S. Patent 6757334) teaches a receiver for FQPSK waveforms, but fails to teach using a plurality of correlators to correlate an input signal with each of a set of averaged waveforms.

Admitted prior art (paragraphs 8, 12, 14, 20, and 22; figures 1 and 3) discloses a conventional Viterbi algorithm receiver, for producing demodulated signals based on FQPSK input signals, but fails to disclose a plurality of correlators to correlate an FQPSK input signal with each of a plurality of averaged waveforms.

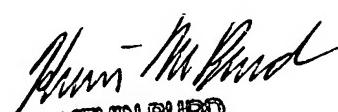
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anika Talapatra whose telephone number is 571-272-6039. The examiner can normally be reached on Monday to Friday, 08:00-16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.T.

  
KEVIN BURD  
PRIMARY EXAMINER